REMARKS

Claims 1-54 remain pending in the application. Reconsideration is respectfully requested in light of the following remarks.

Section 103(a) Rejections:

The Office Action rejected claims 1-54 under 35 U.S.C. § 103(a) as being unpatentable over Larson et al. (U.S. Publication 2001/0047497) (hereinafter "Larson") or Davis (U.S. Patent 5,819,109), in view of Katz et al. (U.S. Patent 5,195,100) (hereinafter "Katz"). Applicants respectfully traverse.

The cited art does not teach or suggest a storage array controller that is configured to issue a first scrubbing operation command to a first disk drive controller, wherein the first disk drive controller is configured to receive the first scrubbing operation command from the storage array controller and, in response to receiving the first scrubbing operation command, to read data from within a data range from at least one of the disk drives, to calculate a new checksum for the data, and to compare the new checksum to a preexisting checksum for the data, as recited in claim 1.

At paragraph 0026 Larson teaches "The present method and architecture incorporates a Redundant Array of Industry Standard DIMMs (RAID)". In paragraph 0025 Larson defines a DIMM as a module of semiconductor memory devices such as DRAM. Thus, Larson's teaching pertain to semiconductor memory modules. Larson has absolutely nothing to do with disk drives and disk drive controllers and therefore does not teach or suggest the storage array controller or storage array that comprises a plurality of disk drives and a plurality of disk drive controllers, as recited in claim 1.

Furthermore, Katz does not describe a drive controller that is configured to receive a first scrubbing operation command from a storage array controller and, in response to receiving the first scrubbing operation command, to read data from within a

data range from at least one of the disk drives, to calculate a new checksum for the data, and to compare the new checksum to a preexisting checksum for the data. The portions of Katz cited by the Examiner have nothing to do with scrubbing operations performed at the disk controller level. Instead, Katz teaches a RAID controller, which upon initialization "scans each write in progress journal stored within nonvolatile memory" to determine whether any write operation was interrupted when power was lost. If a journal has not been erased, the controller "causes data blocks from those sectors to be read from disks 307 to the RAID buffers 407 and then compares the time stamps from each data block with the expected value as read from nonvolatile memory 413" to determine whether data corruption occurred. Neither Larson nor Katz, alone or in combination, teaches or suggests a disk drive controller configured to, in response to a scrubbing operation command from the storage array controller, determine whether data corruption has occurred in a data range of its disk storage through the generation of a checksum, as presented in claim1.

In Davis, the scrubber operation is implemented by the RAID controller or RAID software in the host (Davis -- col. 5, lines 14-28). Similarly, the operations in Katz are performed at the RAID controller level, as discussed above. Neither Davis nor Katz, alone or in combination, teaches or suggests a disk drive controller configured to, in response to a scrubbing operation command from the storage array controller, determine whether data corruption has occurred in a data range of its disk storage through the generation of a checksum, as presented in claim1.

Applicants assert that independent claims 23 and 47 are patentably distinguishable over the cited prior art for reasons similar to those given above with regard to claim 1. None of the art cited by the Examiner contains any suggestion at all of a storage array controller issuing a first scrubbing operation command to a disk controller, where, in response to receiving the first scrubbing operation command, the disk controller reads the data within a first data range, computes a new first checksum for the data within the first data range, and compares the new first checksum to an original first checksum for the first data range, and if the new first checksum differs from the original first checksum,

the disk controller indicates that the data within the first range is erroneous. Larson has nothing to do with disk arrays and disk controllers, and in Davis and Katz none of the operations referred to by the Examiner are performed at the disk controller level. Instead, the operations in Davis and Katz are performed at the RAID (array) controller level and/or in host software.

The Examiner seems to be ignoring specific limitations of the independent claims. Applicants remind the Examiner that "All words in a claim must be considered in judging the patentability of that claim against the prior art." M.P.E.P. 2143.03 *citing In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). For a rejection to be proper, the Examiner should perform a clause-by-clause comparison between the claims and the cited art. The Examiner has failed to make any such showing in this Action. Applicant's remind the Examiner that he has the burden of proof which requires him to produce the factual basis for his rejection. *In re Warner*, 154 USPQ 173, 177 (C.C.P.A. 1967), *cert. denied*, 389 U.S. 1057 (1968). The Examiner has clearly not made a proper comparison between the limitations of the independent claims and the prior art. Applicants also remind the Examiner that 37 CFR 1.104(c)(2) requires that the Examiner designate the *particular* part of each reference relied upon as nearly as practicable and clearly explain the pertinence of each reference.

Furthermore, Applicants specifically traverse the rejection of each of the dependent claims. Applicants assert that the combination of features recited in each of the dependent claims is not taught or suggested by the cited art. The Examiner made no attempt to show how each specific combination of features recited in each dependent claim is taught or suggested by the cited art. Applicants remind the Examiner that the statute clearly places a burden of proof on the Examiner to show why each claim is anticipated or rendered obvious by the prior art. *In re Warner*, 154 USPQ 173, 177 (C.C.P.A. 1967), *cert. denied*, 389 U.S. 1057 (1968). **The rejection of each dependent claim is improper since the Examiner has not demonstrated how the specific combination of features recited in each dependent claim is taught or suggested by the cited art.** Applicants further assert that a careful review of Larson, Davis and Katz

does not reveal any teachings that would anticipate or rendered obvious any of Applicants' dependent claims.

CONCLUSION

Applicants submit the application is in condition for allowance, and notice to that effect is respectfully requested.

If any extension of time (under 37 C.F.R. § 1.136) is necessary to prevent the above referenced application from becoming abandoned, Applicants hereby petition for such extension. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5181-80501/RCK.

Also enclosed herewith are the following items:

☒ Return Receipt Postcard

☐ Petition for Extension of Time

☐ Notice of Change of Address

☐ Fee Authorization Form authorizing a deposit account debit in the amount of $ for fees ( ).

☐ Other:

Respectfully submitted,

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